

TDMs No. 96015 - 05

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS
ABRIDGED) (a)**

Date Report Reqsted: 08/21/2007

Test Type: CHRONIC

Water disinfection byproducts (Dibromoacetonitrile)

Time Report Reqsted: 09:21:42

Route: DOSED WATER

CAS Number: 3252-43-5

First Dose M/F: 09/05/01 / 09/05/01

Species/Strain: RATS/F 344

Lab: SRI

F_2 R2

C Number: C96015

Lock Date: 04/30/2004

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

TDMSE Version: 1.8.0

Test Type: CHRONIC

Water disinfection byproducts (Dibromoacetonitrile)

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Route: DOSED WATER

CAS Number: 3252-43-5

First Dose M/F: 09/05/01 / 09/05/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	12	11	22	10
Natural Death	7	6	3	5
Survivors				
Terminal Sacrifice	31	33	25	35
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(48)	(50)	(50)	(50)
Intestine Large, Cecum	(48)	(49)	(50)	(47)
Intestine Large, Colon	(48)	(50)	(49)	(47)
Adenoma			1 (2%)	2 (4%)
Carcinoma	1 (2%)			
Intestine Large, Rectum	(49)	(50)	(50)	(49)
Adenoma		1 (2%)	1 (2%)	
Intestine Small, Duodenum	(49)	(49)	(50)	(48)
Intestine Small, Ileum	(46)	(48)	(50)	(47)
Intestine Small, Jejunum	(47)	(46)	(49)	(47)
Liver	(50)	(50)	(50)	(50)
Hepatocellular Adenoma			1 (2%)	
Hepatocellular Carcinoma			1 (2%)	
Mesentery	(14)	(18)	(18)	(15)
Oral Mucosa	(0)	(0)	(1)	(3)
Squamous Cell Carcinoma				2 (67%)
Squamous Cell Papilloma			1 (100%)	1 (33%)
Pancreas	(49)	(50)	(50)	(50)
Acinus, Adenoma	1 (2%)		2 (4%)	
Duct, Carcinoma			1 (2%)	
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(49)	(50)	(50)
Squamous Cell Papilloma		1 (2%)		1 (2%)
Stomach, Glandular	(50)	(50)	(50)	(50)
Adenoma				1 (2%)
Adenoma, Multiple				1 (2%)

a - Number of animals examined microscopically at site and number of animals with lesion

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
Tongue	(50)	(50)	(50)	(50)
Squamous Cell Carcinoma			1 (2%)	1 (2%)
Squamous Cell Papilloma			1 (2%)	1 (2%)
Tooth	(1)	(0)	(0)	(0)
CARDIOVASCULAR SYSTEM				
Blood Vessel	(1)	(0)	(1)	(0)
Heart	(50)	(50)	(50)	(50)
Schwannoma Benign				2 (4%)
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Adenoma				1 (2%)
Adrenal Medulla	(50)	(50)	(49)	(49)
Ganglioneuroma			1 (2%)	
Pheochromocytoma Benign	9 (18%)	5 (10%)	7 (14%)	7 (14%)
Pheochromocytoma Complex				1 (2%)
Pheochromocytoma Malignant			3 (6%)	
Bilateral, Pheochromocytoma Benign	1 (2%)	1 (2%)		1 (2%)
Islets, Pancreatic	(49)	(50)	(50)	(50)
Adenoma	5 (10%)	4 (8%)	3 (6%)	3 (6%)
Carcinoma	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Parathyroid Gland	(46)	(44)	(43)	(47)
Adenoma	1 (2%)			1 (2%)
Pituitary Gland	(50)	(50)	(48)	(49)
Pars Distalis, Adenoma	24 (48%)	14 (28%)	20 (42%)	24 (49%)
Pars Distalis, Carcinoma		1 (2%)		
Pars Intermedia, Carcinoma		1 (2%)	1 (2%)	
Thyroid Gland	(49)	(47)	(49)	(46)
C-cell, Adenoma	10 (20%)	5 (11%)	4 (8%)	9 (20%)
C-cell, Carcinoma	1 (2%)	2 (4%)		
Follicular Cell, Carcinoma			1 (2%)	1 (2%)
GENERAL BODY SYSTEM				
Peritoneum	(2)	(6)	(0)	(2)
Tissue NOS	(1)	(0)	(2)	(1)

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
GENITAL SYSTEM				
Coagulating Gland	(1)	(0)	(1)	(0)
Epididymis	(50)	(50)	(50)	(50)
Preputial Gland	(48)	(50)	(50)	(50)
Adenoma	1 (2%)	2 (4%)	3 (6%)	1 (2%)
Carcinoma		1 (2%)	2 (4%)	
Prostate	(49)	(50)	(50)	(50)
Seminal Vesicle	(50)	(49)	(50)	(50)
Testes	(50)	(50)	(50)	(50)
Bilateral, Interstitial Cell, Adenoma	34 (68%)	38 (76%)	38 (76%)	40 (80%)
Interstitial Cell, Adenoma	15 (30%)	6 (12%)	4 (8%)	8 (16%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(26)	(24)	(19)	(21)
Mediastinal, Fibrous Histiocytoma, Metastatic, Skin	1 (4%)			
Lymph Node, Mandibular	(1)	(0)	(3)	(0)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Fibrous Histiocytoma, Metastatic, Skin	1 (2%)			
Spleen	(49)	(50)	(50)	(50)
Thymus	(43)	(50)	(44)	(45)
INTEGUMENTARY SYSTEM				
Mammary Gland	(46)	(49)	(47)	(46)
Carcinoma	1 (2%)		1 (2%)	
Fibroadenoma	6 (13%)	3 (6%)	3 (6%)	2 (4%)
Skin	(50)	(50)	(50)	(50)
Basal Cell Adenoma	2 (4%)		2 (4%)	2 (4%)
Basal Cell Carcinoma	2 (4%)	1 (2%)		1 (2%)
Keratoacanthoma	6 (12%)	6 (12%)	5 (10%)	5 (10%)
Keratoacanthoma, Multiple		1 (2%)		
Squamous Cell Carcinoma		1 (2%)		1 (2%)
Squamous Cell Papilloma				1 (2%)
Trichoepithelioma			1 (2%)	

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
Pinna, Neural Crest Tumor		1 (2%)	1 (2%)	
Pinna, Squamous Cell Papilloma	1 (2%)			
Sebaceous Gland, Adenoma			1 (2%)	
Subcutaneous Tissue, Fibroma	7 (14%)	6 (12%)	1 (2%)	4 (8%)
Subcutaneous Tissue, Fibroma, Multiple	1 (2%)		3 (6%)	2 (4%)
Subcutaneous Tissue, Fibrous Histiocytoma	1 (2%)			
Subcutaneous Tissue, Lipoma	1 (2%)			
Subcutaneous Tissue, Osteosarcoma		1 (2%)		
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Vertebra, Chordoma			1 (2%)	
Skeletal Muscle	(1)	(3)	(1)	(1)
Squamous Cell Carcinoma, Metastatic, Skin		1 (33%)		
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pituitary Gland		2 (4%)		
Carcinoma, Metastatic, Zymbal'S Gland			1 (2%)	
Peripheral Nerve	(2)	(0)	(4)	(0)
Schwannoma Malignant			1 (25%)	
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	2 (4%)	3 (6%)		
Alveolar/Bronchiolar Adenoma, Multiple	1 (2%)			
Alveolar/Bronchiolar Carcinoma	1 (2%)	1 (2%)	1 (2%)	
Carcinoma, Metastatic, Zymbal'S Gland			1 (2%)	
Chordoma, Metastatic, Uncertain Primary Site			1 (2%)	
Fibrous Histiocytoma, Metastatic, Skin	1 (2%)			
Neural Crest Tumor, Metastatic, Skin		1 (2%)	1 (2%)	
Nose	(50)	(50)	(50)	(50)
Osteochondroma		1 (2%)		

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
Squamous Cell Carcinoma, Metastatic, Oral Mucosa Trachea	(50)	(50)	(50)	1 (2%) (50)
SPECIAL SENSES SYSTEM				
Eye	(48)	(47)	(48)	(47)
Harderian Gland	(50)	(50)	(50)	(50)
Zymbal's Gland	(0)	(0)	(2)	(0)
Carcinoma			2 (100%)	
URINARY SYSTEM				
Kidney	(49)	(50)	(50)	(50)
Urethra	(0)	(1)	(1)	(0)
Urinary Bladder	(50)	(50)	(49)	(50)
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma		1 (2%)	1 (2%)	2 (4%)
Leukemia Mononuclear	21 (42%)	19 (38%)	20 (40%)	20 (40%)
Lymphoma Malignant		1 (2%)		
Mesothelioma Malignant		6 (12%)		1 (2%)

a - Number of animals examined microscopically at site and number of animals with lesion

* Number of animals with any tissue examined microscopically

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
Tumor Summary for Males				
Total Animals with Primary Neoplasms (b)	50	49	50	49
Total Primary Neoplasms	157	135	142	152
Total Animals with Benign Neoplasms	50	47	47	48
Total Benign Neoplasms	128	97	103	120
Total Animals with Malignant Neoplasms	27	29	31	25
Total Malignant Neoplasms	29	37	38	32
Total Animals with Metastatic Neoplasms	1	4	3	1
Total Metastatic Neoplasms	3	4	5	1
Total Animals with Malignant Neoplasms Uncertain Primary Site			1	
Total Animals with Neoplasms Uncertain-Benign or Malignant		1	1	
Total Uncertain Neoplasms		1	1	

*** END OF MALE ***

a - Number of animals examined microscopically at site and number of animals with lesion

b - Primary tumors: all tumors except metastatic tumors

Test Type: CHRONIC

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	9	11	16	12
Natural Death	12	4	5	7
Survivors				
Terminal Sacrifice	29	35	29	31
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(49)	(50)	(50)	(50)
Intestine Large, Cecum	(46)	(50)	(47)	(50)
Intestine Large, Colon	(48)	(50)	(49)	(50)
Adenoma				1 (2%)
Intestine Large, Rectum	(49)	(49)	(48)	(49)
Adenoma		1 (2%)		
Carcinoma	1 (2%)			
Schwannoma Malignant, Metastatic, Uterus	1 (2%)			
Intestine Small, Duodenum	(49)	(50)	(50)	(49)
Intestine Small, Ileum	(45)	(48)	(49)	(49)
Intestine Small, Jejunum	(42)	(48)	(48)	(46)
Liver	(50)	(50)	(50)	(50)
Hepatocellular Adenoma			1 (2%)	
Mesentery	(20)	(11)	(17)	(15)
Schwannoma Malignant, Metastatic, Uterus	1 (5%)			
Oral Mucosa	(0)	(0)	(1)	(1)
Squamous Cell Papilloma			1 (100%)	
Pancreas	(50)	(50)	(50)	(50)
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Stomach, Glandular	(49)	(50)	(50)	(50)
Tongue	(50)	(50)	(50)	(50)
Squamous Cell Papilloma	1 (2%)		3 (6%)	
Tooth	(1)	(0)	(0)	(0)

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Schwannoma Benign	1 (2%)			1 (2%)
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Adenoma				2 (4%)
Adrenal Medulla	(49)	(50)	(50)	(50)
Ganglioneuroma			1 (2%)	
Pheochromocytoma Benign	1 (2%)	2 (4%)	1 (2%)	
Islets, Pancreatic	(50)	(50)	(50)	(49)
Adenoma	1 (2%)	1 (2%)		2 (4%)
Parathyroid Gland	(42)	(42)	(43)	(43)
Pituitary Gland	(49)	(48)	(50)	(50)
Pars Distalis, Adenoma	27 (55%)	31 (65%)	29 (58%)	22 (44%)
Pars Distalis, Carcinoma			1 (2%)	
Thyroid Gland	(46)	(48)	(48)	(46)
Bilateral, C-cell, Adenoma	2 (4%)			
C-cell, Adenoma	4 (9%)	6 (13%)	6 (13%)	5 (11%)
C-cell, Carcinoma		1 (2%)		
Follicular Cell, Adenoma	1 (2%)		2 (4%)	
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Clitoral Gland	(50)	(50)	(47)	(50)
Adenoma	4 (8%)	1 (2%)	1 (2%)	3 (6%)
Carcinoma	1 (2%)	5 (10%)	4 (9%)	3 (6%)
Bilateral, Adenoma	1 (2%)	1 (2%)		
Ovary	(50)	(50)	(50)	(50)
Granulosa-Theca Tumor Benign	1 (2%)			
Oviduct	(1)	(0)	(1)	(0)

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
Uterus	(50)	(50)	(50)	(50)
Hemangiosarcoma	1 (2%)			
Schwannoma Malignant			1 (2%)	
Endometrium, Adenoma		1 (2%)		1 (2%)
Endometrium, Polyp Stromal	12 (24%)	10 (20%)	4 (8%)	11 (22%)
Endometrium, Polyp Stromal, Multiple	1 (2%)			
Endometrium, Schwannoma Malignant	1 (2%)			
Vagina	(6)	(2)	(7)	(7)
Polyp		1 (50%)		
Schwannoma Malignant, Metastatic, Uterus	1 (17%)		1 (14%)	
HEMATOPOIETIC SYSTEM				
Bone Marrow	(49)	(50)	(50)	(50)
Lymph Node	(21)	(15)	(23)	(15)
Deep Cervical, Carcinoma, Metastatic, Thyroid Gland		1 (7%)		
Lymph Node, Mandibular	(3)	(2)	(2)	(2)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Spleen	(50)	(50)	(50)	(50)
Hemangiosarcoma				1 (2%)
Thymus	(48)	(49)	(48)	(49)
INTEGUMENTARY SYSTEM				
Mammary Gland	(49)	(50)	(50)	(50)
Adenoma			1 (2%)	
Carcinoma	2 (4%)	5 (10%)	3 (6%)	3 (6%)
Carcinoma, Multiple			2 (4%)	
Fibroadenoma	14 (29%)	19 (38%)	21 (42%)	19 (38%)
Fibroadenoma, Multiple	17 (35%)	17 (34%)	10 (20%)	6 (12%)
Skin	(50)	(50)	(50)	(49)
Basal Cell Adenoma			1 (2%)	1 (2%)
Basal Cell Carcinoma			1 (2%)	
Keratoacanthoma				1 (2%)
Squamous Cell Papilloma			1 (2%)	2 (4%)
Subcutaneous Tissue, Fibroma			3 (6%)	
Subcutaneous Tissue, Fibroma, Multiple			1 (2%)	

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Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
Subcutaneous Tissue, Fibrosarcoma	1 (2%)		1 (2%)	
Subcutaneous Tissue, Lipoma				
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Vertebra, Chondrosarcoma	1 (2%)			
Skeletal Muscle	(3)	(0)	(0)	(0)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pituitary Gland			1 (2%)	
Glioma Malignant		1 (2%)		
Spinal Cord	(5)	(3)	(2)	(4)
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	1 (2%)		1 (2%)	
Alveolar/Bronchiolar Adenoma, Multiple				1 (2%)
Alveolar/Bronchiolar Carcinoma				1 (2%)
Nose	(50)	(50)	(50)	(50)
Respiratory Epithelium, Adenoma				1 (2%)
Trachea	(50)	(50)	(50)	(50)
SPECIAL SENSES SYSTEM				
Eye	(47)	(50)	(50)	(48)
Harderian Gland	(50)	(50)	(50)	(50)
Zymbal's Gland	(0)	(0)	(1)	(0)
Carcinoma			1 (100%)	
URINARY SYSTEM				
Kidney	(50)	(49)	(50)	(49)
Urinary Bladder	(50)	(50)	(49)	(50)

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TDMS No. 96015 - 05

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ABRIDGED) (a)**

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma		2 (4%)		
Leukemia Mononuclear	14 (28%)	9 (18%)	10 (20%)	12 (24%)
Lymphoma Malignant	1 (2%)	1 (2%)		

a - Number of animals examined microscopically at site and number of animals with lesion

* Number of animals with any tissue examined microscopically

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Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	50 MG/L	100 MG/L	200 MG/L
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Tumor Summary for Females

Total Animals with Primary Neoplasms (b)	48	49	49	47
Total Primary Neoplasms	112	115	112	99
Total Animals with Benign Neoplasms	44	48	49	43
Total Benign Neoplasms	89	91	89	79
Total Animals with Malignant Neoplasms	20	20	21	18
Total Malignant Neoplasms	23	24	23	20
Total Animals with Metastatic Neoplasms	1	1	2	
Total Metastatic Neoplasms	3	1	2	
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain-Benign or Malignant				
Total Uncertain Neoplasms				

*** END OF REPORT ***

a - Number of animals examined microscopically at site and number of animals with lesion

b - Primary tumors: all tumors except metastatic tumors